

Appl. No.: 10/036,273
Amdt. dated April 27, 2004
Reply to Office action of February 18, 2004

REMARKS/ARGUMENTS

Applicant received the Office Action dated February 18, 2004, in which the Examiner: (1) rejected claims 1-13 under 35 U.S.C. § 112, second paragraph; (2) rejected claims 14-17 under § 102(b) as anticipated by Chen; (3) rejected claim 18 as anticipated by, or in the alternative obvious over, Chen; (4) rejected claims 1, 4, 7, 10, 14, and 17 under section 102(e) as anticipated by Kaminski; (5) rejected claims 1-5 and 7-11 as obvious over Takeda; and (6) rejected claim 13 as obvious over Chen in view of Takeda and Nagaraj. The Examiner also concluded that claims 6, 12, and 19 contain allowable subject matter. In this Response, Applicant amends claims 1, 6, 7, and 14. Based on the arguments and amendments contained herein, Applicant respectfully requests the Examiner to allow all pending claims.

I. THE § 112, SECOND PARAGRAPH, REJECTIONS

The Examiner rejected claims 1 and 7 for referring to the "temperature control logic" (claim 1) and the "electronics unit" (claim 7) without proper antecedent basis. Applicant amends claim 1 to replace "temperature control logic" with "temperature control unit." Applicant also amends claim 7 to replace "electronics unit" with "CPU." These amendments do not narrow the scope of the claims and fully address the Examiner's § 112 concerns.

II. THE ART REJECTIONS

The Examiner relied primarily on Chen and Kaminski. Chen is directed to a system in which fan speed is controlled based on temperature. As shown in Figure 1 of Chen, at system initialization, the fan is set at a default speed. Then, if the temperature of the system exceeds a threshold, the fan speed increases until the temperature no longer exceeds the threshold. See also col. 2, lines 20-39.

Kaminski is directed to a system that also adjusts fan speed based on temperature. Figure 4 in Kaminski shows a fan speed control circuit that controls the speed of fan based on temperature-related inputs from a thermistor circuit and from a microprocessor. The following passage is taken from col. 3, line 57 through col. 4, line 9 and describes the system of Figure 4.

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FIG. 4 shows a block diagram of the inputs to and output from the Fan Speed Control Circuit. The Fan Speed Control Circuit receives two inputs: one from a Thermistor Circuit and another, software controlled input, from the Microprocessor. During normal operation, when the user first powers-up the system, the fan turns on. The Thermistor circuit provides control of the fan speed relative to the temperature of the power supply. The Microprocessor provides software control of the fan speed relative to its temperature. The Fan Speed Control Circuit selects the higher of the two inputs to control the speed of the fan. The circuit operates to regulate the fan speed as necessary to maintain a controlled thermal environment for the system. The system can only increase the power supply fan speed, it can never be commanded by the processor to run at a lower speed than that required by its thermal environment. However, if both the system and the thermistor circuit lower their fan speed requirements, the fan speed will lower. Even in this even, the fan will run at the higher speed according to the Fan Speed control circuit inputs.

Amended claim 1 is directed to an electronic system that includes a "temperature control unit [that] is capable of implementing a plurality of temperature control protocols, all of said protocols effecting the speed of said fan as a function of only one variable temperature indication." Further, the claimed "temperature control unit implements a first temperature control protocol upon system initialization and changes to a second temperature control protocol if said electronics unit asserts a temperature signal, wherein said first temperature control protocol causes the fan to spin at a different speed than the second temperature control protocol for the same level of the temperature indication." Applicant removed the reference to the requirement that the first temperature control protocol is quieter on average than the second temperature control protocol. In light of the other amendments, this noise-related requirement is not considered necessary for the patentability of claim 1.

In no way limiting the scope of claim 1 and merely purposes of the Examiner's understanding, the Examiner's attention is respectfully directed to Figures 3 and 4 of Applicant's disclosure. Each of Figures 3 and 4 shows an example of a pair of temperature control protocols (protocols 42 and 44 in Figure 3 and protocols 54 and 56 in Figure 4). For at least one temperature indication in both examples, the two protocols have different fan speeds.

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Kaminski does not teach the feature of claim 1 explained above. Instead, Kaminski teaches changing fan speed based on two separate temperature indications—one from the thermistor circuit and the other from the microprocessor). Kaminski does not teach two temperature control protocols that have different fan speeds for the same level of a temperature indication. Further, because of the exclusion for commonly-owned § 102(e) art in § 103, Kaminski cannot be used in an obviousness rejection of any of the pending claims. For at least these reasons, claim 1 is patentable over Kaminski.

Chen does not teach or suggest multiple temperature control protocols in which different fan speeds are implemented for the same temperature indication level. Takeda is similarly deficient. Thus, claim 1 is allowable over the combination of Chen and Takeda.

For any or all of the reasons stated above, claim 1 is patentable over the art of record as explained above. Claims 2-5 depend on or from claim 1 and are allowable at least for the same reasons as claim 1.

The Examiner indicated claim 6 contained allowable subject matter. Applicant has rewritten claim 6 in independent form including most, but not all, of the limitations from claims 1 and 5. Applicants omitted the reference to the first temperature control protocol being quieter on average than the second temperature control protocol as being an unnecessary for patentability.

Independent claim 7 has been amended similar to that of claim 1 and is patentable at least for the same reasons as claim 1. Claims 8-13 depend on or from claim 7 and are allowable at least for the same reasons as claim 7.

Independent method claim 14 has been amended as shown above. As amended, the first and second temperature control protocols react "to only one temperature indication" and that particular temperature indication is the same for both temperature control protocols. Further, the "first temperature control protocol causes a fan to spin at a different speed than the second temperature control protocol for the same level of the temperature indication." Claim 14 was rejected over Chen and over Kaminski. For the reasons explained above, neither

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precludes the patentability of claim 14. Claims 15-19 depend on or from claim 14 and are patentable at least for the same reasons as claim 14.


Despite the Examiner's conclusion that dependent claims 12 and 19 would be allowed if rewritten in Independent form, Applicant opts not to rewrite those claims. Claims 12 and 19 are patentable at least for the same reasons as their base claims. Claims 12 and 19 are also patentable for the reasons observed by the Examiner.

III. CONCLUSION

In the course of the foregoing discussions, Applicant may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

Respectfully submitted,


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